

**INTERPOLATION BY FUNCTIONS FROM A SOBOLEV SPACE WITH
MINIMUM L_p -NORM OF THE LAPLACE OPERATOR****S. I. Novikov**

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We consider an interpolation problem with minimum value of the L_p -norm ($1 \leq p < \infty$) of the Laplace operator of interpolants for a class of interpolated sequences that are bounded in the l_p -norm. The data are interpolated at nodes of the grid formed by points from \mathbb{R}^n with integer coordinates. It is proved that, if $1 \leq p < n/2$, then the L_p -norm of the Laplace operator of the interpolant can be arbitrarily small for any sequence that is interpolated. Two-sided estimates for the L_2 -norm of the Laplace operator of the best interpolant are found for the case $n = 2$.

Keywords: interpolation, Laplace operator, Sobolev space, embedding.

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